REMARKS

The Office Action dated February 25, 2008 has been received and carefully reviewed. The preceding amendments and the following remarks form a full and complete response thereto. Claims 1, 7-9, 14, 20-22, 27, 33-35, 40, 46, and 52-54 are amended. Support for amended claims 1, 7, 8, 14, 27, and 40 can be found, inter alia, in paras. [0027]-[0029]. Support for amended claims 9, 20-22, 33-35, and 46 can be found, inter alia, in paras. [0040]-[0041]. Support for amended claims 52-24 can be found, inter alia, in para. [0141] and Fig. 17. (Para. references are to those of the Patent Application Publication of the present application.) No new matter is added. Claims 1-54 are pending in this application. Reconsideration and allowance in view of the foregoing amendments and following remarks are requested.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 1, 6-8, 12-13, 40 and 52 were rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent Application No. 2003/0225660 by Noser et al. (Noser) in view of *Financial Analyst Journal* article "The Cost of Institutional Equity Trades" (1998), by Keim and Madhavan (Keim). Applicants respectfully traverse the rejection and submit that claims 1, 6-8, 12-13, 40 and 52 recite subject matter not shown or suggested by the cited references either singly or in combination.

Claim 1, upon which claims 2-13 and 52 depend, recites a method for creating a database having a step of collecting security transaction data for a preselected period of time, for a plurality of institutional investors. The transaction data includes identity of securities being traded, transaction order sizes, execution prices and execution times. The method further includes a step of grouping the transaction data into groups of orders, wherein each group of

orders consists of orders associated with a common category from a plurality of common categories, and a step of calculating cost benchmarks for each group of orders. The grouping of transaction data into groups of orders includes combining discrete transaction data which form an order into each order. The method also includes steps of estimating transaction costs for each institutional investor from the transaction data relative to each of the calculated cost benchmarks for each category of said plurality of common categories and storing the data for the calculated benchmarks and the estimated transaction costs.

Claim 40, upon which claims 41-51 and 54 depend, recites a system for ranking security transaction cost performance relative to transaction costs for institutional investors having: a processing unit coupled with a network and configured to collect security transaction data for a pre-selected period of time for institutional investors, where the transaction data includes the identity of the securities being traded, transaction order sizes, execution prices, momentum and execution times. The processing unit is configured to group the transaction data into groups of orders, wherein each group of orders consists of orders associated with a common category associated with a common category from a plurality of common categories. The grouping of transaction data into groups of orders includes combining discrete transaction data which form an order into each order. The processing unit is further configured to calculate cost benchmarks for each group of orders, to estimate transaction costs for each order from the transaction data relative to each of the calculated cost benchmarks for each category of the plurality of common categories, and to store the data for the calculated benchmarks and the estimated transaction costs in a database. The system further comprises a database unit coupled with the processing unit and configured to communicate with the processing unit, store data, and make data available to the processing unit.

As a result of the claimed configuration, novel systems and methods are provided that generate for institution investors useful, non obvious estimated transactions costs relative to benchmarks for categories of security data in a cost factor, such as, e.g., type, market, market capitalization, and short term momentum. See para. [0040]. From this "peer group" data, a novel and non obvious graphical or other display can be generated that compares one institutional investor's performance against a plurality of institution investors for a combination of benchmarks and categories. See, e.g., Fig 17. No combination of the references teaches or suggests such a combination of inventive features as claimed in claims 1-54.

Noser is merely directed to systems and methods for analysis of portfolio returns and trade cost measurement based on fiduciary roles. See Title. Noser discloses methods for measuring, not estimating, actual trade costs within a measurement framework. See Abstract, paras. 6-7 of Noser. As conceded in the Office Action at 3, Noser fails to disclose, teach, or suggest grouping transaction data into groups of orders, wherein each group of orders consists of a plurality of orders associated with a common category (e.g., market cap) from a plurality of common categories; calculating a plurality of cost benchmarks for each group; estimating transaction costs for each institutional investor from the transaction data relative to each of the calculated cost benchmarks for each category of said plurality of common categories; wherein the grouping of transaction data into groups of orders includes combining discrete transaction data which form an order into each order; and storing the data for the calculated benchmarks and the estimated transaction costs as recited in claim 1.

Moreover, Noser also fails to disclose, teach, or suggest a processing unit configured to group said transaction data into groups of orders, wherein each group of orders consists of a plurality of orders associated with a common category from a plurality of common categories, to

calculate a plurality of cost benchmarks for each group, estimate transaction costs for each order from the transaction data relative to each of the calculated cost benchmarks for each category of the plurality of common categories, and to store said data for said calculated benchmarks and said estimated transaction costs in a database as recited in claim 40.

Keim fails to cure the above-described deficiencies of Noser. Keim is merely a review article presenting an overview of findings in the literature on the cost of U.S. equity trades for institutional investors. See Abstract. Keim teaches the use of cost benchmarks to estimate a transaction cost. However Keim, like Noser, fails to disclose, teach, or suggest grouping transaction data into groups of orders, wherein each group of orders consists of a plurality of orders associated with a common category from a plurality of common categories, calculating a plurality of cost benchmarks for each group, and estimating transaction costs for each order from the transaction data relative to each of the calculated cost benchmarks for each category of the plurality of common categories wherein the grouping of transaction data into groups of orders includes combining discrete transaction data which form an order into each order. Thus, the combination of Noser and Keim fails to put the public in possession of the claimed subject matter. Because the combination of Noser and Keim fails to disclose, teach, or suggest each limitation of the claims, the rejection of independent claims 1 and 40 and dependent claims 6-8, 12-13, 40 and 52 is improper and Applicants respectfully request that the rejection be withdrawn.

With regard to claim 6 and claim 8, the rejection is improper for the additional, independent reason that the cited references do not disclose that the plurality of cost benchmarks include C_{T+20}. The Examiner does not point to any reference disclosing this benchmark and using it as cost benchmarks, but merely asserts that "it would have been obvious to one of ordinary skills [sic] in the art to include these other cost benchmarks to the ones cited in Keim

for the obvious reason of enhancing the functionality of the system." The Examiner is assuming his conclusion without any support and applying impermissible hindsight. The Examiner is applying the teachings of the present application, which teaches and claims a specific set of cost benchmarks, to assert that the claims are obvious. Thus, this rejection is improper.

With regard to claims 7 and 8, the rejection is improper for the additional, independent reason that the cited references do not disclose that the cost factors include size and momentum as claimed. With regard to claim 40, the rejection is improper for the additional, independent reason that Noser and Keim do not disclose ranking as claimed (this is conceded in the Office Action at 5 with regard to Noser; Keim does not remedy this deficiency). Therefore, for at least these additional and independent reasons, the rejection of claims 6-8, 12, 40, and 47 is improper and Applicants request that the rejection be withdrawn.

The rejection of claim 52 is improper for the additional, independent reason that the combination of Keim and Noser fails to disclose or suggest preparing a graphical representation for display on a client interface the estimated transaction costs for a selected benchmark for a selected institutional investor for one or more selected common categories relative to one or more measures of central tendency or extrema of the estimated transaction costs of the plurality of institutional investors for the selected bench mark for the selected one or more common categories as claimed. Therefore, Applicants request that the rejection of claim 52 be withdrawn for this additional and independent reason.

Claims 2-5, 9-11 and 41-48 were rejected under 35 U.S.C. § 103(a) as obvious over Noser and Keim as applied to claim 1, in further view of the *Statistica Sinica* journal article "Regression Percentiles Using Asymmetric Squared Error Loss" (1991), by Efron ("Efron").

Applicants respectfully traverse the rejection and submit that claims 2-5, 9-11 and 41-48 recite subject matter that is not shown or suggested by the combination of cited references.

As described above, the combination of Noser and Keim fails to disclose or suggest each and every feature of claims 1 and 40, upon which claims 2-5, 9-11 and 41-48 depend. Applicants submit that Efron fails to cure the above-described deficiencies of the Noser – Keim combination. In particular, Efron does not disclose or suggest grouping transaction data, calculating a plurality of cost benchmarks, or estimating transaction costs, as defined by the claims of the present invention. Thus, the combination of cited prior art fails to disclose each and every feature of claims 2-5, 9-11 and 41-48, and this rejection is improper. Accordingly, Applicants request that the rejection be withdrawn and that claims 2-5, 9-11 and 41-48 be allowed.

With regard to claims 45-48, the rejection is improper for the additional, independent reason that the cited references do not disclose that the plurality of cost benchmarks includes C_{T+20}. See, argument above regarding claims 6 and 8. The rejection of claims 3-5, 9-11, and 42-48 is improper for the additional, independent reason that the combination of Noser, Keim, and Efron fails to disclose, teach, or suggest a regression utilizing the formula $X_i = \alpha_i + \beta_i f(S) + \gamma_i g(M) + \varepsilon_i$, for percentiles i = 25, 40, 50, 60 or 75, where each percentile i is assumed to depend linearly on functions f and g of size (S) and momentum (M) respectively, and $(\alpha_i, \beta_i, \gamma_i)$ are regression parameters. The Examiner asserts that Efron teaches regression percentiles and that Keim teaches regression analysis. However, the Examiner fails to cite a disclosure or suggestion of the foregoing formula and claim limitation in Keim or Efron. In fact, Keim and Efron fail to disclose or suggest this claim limitation. Therefore, the rejection of

claims having this limitation is improper and Applicants request that the rejection of claims 3-5, 9-11, and 42-48 be withdrawn at least for this additional and independent reason.

The Examiner rejected claims 14, 19-21, 25-27, 32-34, 38-39, 49-51 and 53 under 35 U.S.C. § 103(a) as obvious in view of Noser and Keim as applied to claim 1 in further view of U.S. Pat. No. 7,016,872 to Bettis. Applicants respectfully traverse the rejection and submit that claims 14, 19-21, 25-27, 32-34, 38-39, 49-51 and 53 recite subject matter not shown or suggested by the combination of cited references.

Claim 14, upon which claims 15-26 depend, recites a method for ranking security transaction cost performance relative to estimated transaction costs for institutional investors. The steps of the method include collecting security transaction data for a preselected period of time, for a plurality of investment institutions, the transaction data including identity of securities being traded, transaction order sizes, execution prices, momentum and execution times. The data is grouped into groups of orders, wherein each group consists of orders associated with a common category from a plurality of common categories. The grouping of transaction data into groups of orders includes combining discrete transaction data which form an order into each order. A plurality of cost benchmarks are calculated for each group of orders in the transaction data. Transaction costs are estimated for each investment institution relative to each of the calculated cost benchmarks for <u>each category</u> of the plurality of common categories. That is, for each investment institution, transaction costs are estimated for the groups of orders associated with that investment institution relative to the performance of the benchmarks for that group, for each category of the common categories. The institutions can then be ranked against the entire

set of institutions based on the estimated transaction costs for at least one of the common categories.

Claim 27, upon which claims 28-39 and 53 depend, recites a system for ranking security transaction cost performance relative to transaction costs for institutional investors having: processing means for collecting security transaction data for a preselected period of time, for a plurality of institutional investors, the transaction data including identity of securities being traded, transaction order sizes, execution prices, momentum and execution times. The system further has means for grouping the transaction data into groups of orders, wherein each group of orders consists of orders associated with a common category from a plurality of common categories. The grouping of transaction data into groups of orders includes combining discrete transaction data which form an order into each order. The system has means for calculating cost benchmarks for each group of orders; estimating transaction costs for each institutional investor from the transaction data relative to each of the calculated cost benchmarks for each category of the plurality of common categories; and ranking a first investment institution of the plurality of investment institutions based on the estimated transaction costs against the plurality of investment institutions for at least one of the common categories. The system further has storing means for receiving data from the processing means, storing the data, and making data available to the processing means.

As described above, the Noser – Keim combination fails to disclose or suggest each and every feature of claims 14 and 40 upon which claims 15-26, 41-51, and 54 depend. Noser, as admitted in the Office Action at 3, and Keim do not disclose, teach, or suggest grouping transaction data into groups of orders, wherein each group of orders consists of a plurality of orders associated with a common category from a plurality of common categories; calculating a

plurality of cost benchmarks for each group; estimating transaction costs for each institutional investor from the transaction data relative to each of the calculated cost benchmarks for each category of the plurality of common categories; and ranking a first investment institution of the plurality of investment institutions based on the estimated transaction costs against the plurality of investment institutions for at least one of the common categories as recited in claim 27, upon which claims 28-39 and 53 depend. (The Office Action expressly concedes that Noser fails to teach ranking. Office Action at 5.)

Applicants submit that Bettis fails to cure the above-described deficiencies of Noser and Keim. In particular, Bettis relates to a method for determining a performance score for an investor for comparison with and ranking against other investors. The performance score is determined based upon the historical performance of the investment and does not relate to estimated transaction costs for an institution. See Abstract.

Bettis does not disclose or suggest "grouping said transaction data into groups of orders, wherein each group of orders consists of a plurality of orders associated with a common category from a plurality of common categories; calculating a plurality of cost benchmarks for each group; [and] estimating transaction costs for each investment institution relative to each of said cost benchmarks and to each category of said plurality of common categories" wherein "the grouping of transaction data into groups of orders includes combining discrete transaction data which form an order into each order" as recited in claim 14.

Bettis does not disclose or suggest "grouping said transaction data into groups of orders, wherein each group of orders consists of a plurality of orders associated with a common category from a plurality of common categories; calculating a plurality of cost benchmarks for each group; [and] estimating transaction costs for each institutional investor relative to each of said

cost benchmarks and to each category of said plurality of common categories" wherein "the grouping of transaction data into groups of orders includes combining discrete transaction data which form an order into each order" as recited in claim 27.

Bettis does not disclose or suggest a processing unit configured "to group said transaction data into groups of orders, wherein each group of orders consists of a plurality of orders associated with a common category from a plurality of common categories, to calculate a plurality of cost benchmarks for each group of orders, to estimate transaction costs for each order from said transaction data relative to each of said calculated cost benchmarks for each category of said plurality of common categories, and to store said data for said calculated benchmarks and said estimated transaction costs in a database" wherein "the grouping of transaction data into groups of orders includes combining discrete transaction data which form an order into each order" as recited in claim 40.

Therefore, Applicants submit that the combination of cited prior art fails to disclose or suggest each and every element of claims 14, 19-21, 25-27, 32-34, 38-39, 49-51 and 53 and the rejection is improper. Accordingly, Applicants request that the rejection of independent claims 14 and 27 (and 40) and dependent claims 19-21, 25, 26, 32-34, 38-39, 49-51 and 53 be withdrawn.

With regard to claims 19, 21, 32 and 34, the rejection is improper for the additional, independent reason that the cited references do not disclose that the plurality of cost benchmarks includes C_{T+20}. See arguments above regarding claims 6 and 8. With regard to claims 20, 21, 33 and 34, the rejection is improper for the additional, independent reason that the combination of references does not disclose size and momentum as factors for ranking institutional investors.

The rejection of claim 53 is improper for the additional and independent reason that the combination of Keim and Noser fails to disclose or suggest preparing a graphical representation for display on a client interface the estimated transaction costs for a selected benchmark for a selected institutional investor for one or more selected common categories relative to one or more measures of central tendency or extrema of the estimated transaction costs of the plurality of institutional investors for the selected bench mark for the selected one or more common categories as claimed. Therefore, Applicants request that the rejection of claim 53 be withdrawn for this additional and independent reason.

For at least these additional and independent reasons, Applicants request that the rejection of claims 14, 19-21, 25-27, 32-34, 38, 39, 49-51 and 53 be withdrawn and that claims 14, 19-21, 25-27, 32-34, 38, 39, 49-51 and 53 be allowed.

The Examiner rejected claims 15-18, 22-24, 28-31 and 35-37 under 35 U.S.C. § 103(a) as obvious in view of the combination of Noser, Keim, Bettis and Efron. Applicants respectfully traverse the rejection and submit that claims 15-18, 22-24, 28-31, and 35-37 recite subject matter not shown or suggested by the combination of cited references.

As described above, the combination of Noser, Keim, and Bettis fails to disclose or suggest each and every feature of claims 14 and 27, upon which claims 15-18, 22-24, 28-31 and 35-37 depend. Applicants submit that Efron fails to cure the deficiencies of Noser, Keim, and Bettis. In particular, Efron does not disclose or suggest grouping transaction data, calculating a plurality of cost benchmarks, or estimating transaction costs. Thus, the combination of cited prior art fails to disclose each and every feature of claims 15-18, 22-24, 28-31 and 35-37, and

this rejection is improper. Accordingly, Applicants request that the rejection be withdrawn and that claims 15-18, 22-24, 28-31 and 35-37 be allowed.

The rejection of claims 16-18, 22-24, 29-31 and 35-37 is improper for the additional, independent reason that the combination of Noser, Keim, Bettis and Efron fails to disclose, teach, or suggest a regression utilizing the formula $X_i = \alpha_i + \beta_i f(S) + \gamma_i g(M) + \varepsilon_i$, for percentiles i = 25, 40, 50, 60 or 75, where each percentile *i* is assumed to depend linearly on functions *f* and *g* of size (S) and momentum (M) respectively, and $(\alpha_i, \beta_i, \gamma_i)$ are regression parameters. See argument above regarding claims 42-48. Therefore, Applicants request that the rejection of claims 16-18, 22-24, 29-31 and 35-37 be withdrawn at least for this additional and independent reason.

Applicants submit that the references, taken singly or together, fail to disclose, teach, or suggest the inventive features of the claims. Applicants submit that Fig. 17 highlights novel features of the claims in that the present invention allows a novel comparison to be made between investment institutions regarding their transaction costs compared to cost benchmarks.

According to the Office Action Summary, claim 54 stands rejected. However, the Detailed Action fails to provide a reason for the rejection. Therefore, Applicants submit that claim 54 is patentable at least for the reasons given above for claim 40, from which claim 54 depends. Applicants request that any rejection be withdrawn and that claim 54 be allowed.

In view of the above remarks, it is believed that the claims satisfy the requirements of the patent statutes and are patentable over the cited art. Reconsideration of the instant application

and early notice of allowance are requested. The Examiner is invited to telephone the undersigned if it is deemed to expedite allowance of the application.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account No. 02-2135.

Respectfully submitted,

Date: 8-25-08 By _____

Brian A. Tollefson
Attorney for Applicants
Registration No. 46,338
ROTHWELL, FIGG, ERNST & MANBECK, p.c.
Suite 800, 1425 K Street, N.W.
Washington, D.C. 20005
Telephone: (202)783-6040